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Dkt. 76175/RSM

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Michael VOGEL  
International  
Application No.: PCT/EP2004/014365  
International  
Filing Date : 16 December 2004  
U.S. Serial No.: 10/581,480  
Filed : June 1, 2006  
For : CALIBRATION OF A SURVEYING INSTRUMENT

1185 Avenue of the Americas  
New York, New York 10036  
26 June 2006

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

ATTENTION: DO/EO/US

Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to applicant's duty of disclosure under 37 C.F.R. §1.56, the documents listed in the attached Form PTO-1449 are brought to the attention of the Examiner. One copy of each of the non-U.S. patent documents also is attached.

Applicant respectfully requests that the documents cited in the Form PTO-1449 be considered by the Examiner in connection with the above-identified application and that such documents be made of record in the application.

Each of the foreign-language documents was: (1) mentioned in the specification; or (2) is accompanied by an English-language abstract to indicate the document's relevance.

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- 1) JP 2005 003 463 - see the attached English-language abstract.
- 2) WO 2004 083 779 - see the attached English-language abstract.
- 3) EP 1 460 377 - see the attached English-language abstract.
- 4) DE 195 34 415 - see the attached English-language abstract.
- 5) Benning document - "The error function E is minimized using a suitable minimization procedure, for example a Gauss-Newton algorithm as described in Benning, Wilhelm: "Statistik in Geodäsie, Geoinformation und Bauwesen", Heidelberg, Germany, 2002, ISBN 3-87907-383-X pp. 140", see lines 15-17 on page 40 of the subject specification.
- 6) Deumlich document - "A detailed derivation of these formulas can be found in Deumlich, F., Staiger, R.: "Instrumentenkunde der Vermessungstechnik", Heidelberg, Germany, 9. edition, pages 206 to 208", see lines 12-14 on page 33 of the subject specification.
- 7) Luhmann document - "In a second exemplary embodiment of the invention the method differs from the method described in the first exemplary embodiment in that a more detailed model for the distortions of the camera is used in which also terms are used which are of higher order and/or not radial-symmetric. Luhmann, Thomas: "Nahbereichsphotogrammetrie: Grundlagen, Methoden und Anwendungen", Heidelberg, Germany 2000, ISBN 3-87907-321-

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X, pp. 119 to 122 disclose corresponding amendments to the model described above", see lines 24-29 on page 42 of the subject specification.

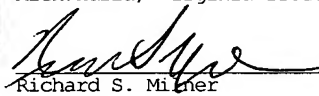
The citation of these documents is not a representation that these documents constitute a complete or exhaustive listing of the relevant art or that these documents are prior art.

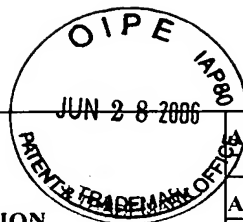
The filing of this Information Disclosure Statement is being made as soon as possible.

No fee is deemed necessary in filing this Information Disclosure Statement. However, if any fee is required, authorization is given to charge any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

  
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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450	
 Richard S. Milner Reg. No. 33,970	<u>26 June 2006</u> Date



Form PTO-1449

U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.  
6175/RSM

Serial No.  
10/581,480

**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

Applicant: Michael VOGEL

Filing Date  
June 1, 2006

Group

**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	US 20 06 00 17 9 3 8	01/26/06	Ohtomo et al.			
	US 6 8 7 3 4 0 7	03/29/05	Vogel			
	US 6 7 3 1 3 2 9	05/04/04	Feist et al.			
	US 20 04 00 04 7 0 6	01/08/04	Uezono et al.			
	US 6 6 3 3 6 6 5	10/14/03	Kim et al.			
	US 20 03 01 60 7 5 7	08/28/03	Shirai et al.			
	US 5 9 3 0 7 4 0	07/27/99	Mathisen			

**FOREIGN PATENT DOCUMENTS**

	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	JP 20 05 00 3 4 6 3	01/06/05	Japan				
	WO 20 04 08 3 7 7 9	09/30/04	International				
	EP 1 4 6 0 3 7 7	09/22/04	Europe				
	EP 0 8 2 9 7 0 1	11/06/02	Europe				
	EP 0 8 8 0 6 7 4	02/27/02	Europe				
	GB 2 3 2 5 5 7 8	11/25/98	United Kingdom				
	EP 0 7 0 0 5 0 6	04/08/98	Europe				
	DE 1 9 5 3 4 4 15	03/20/97	Germany				
	EP 0 4 0 9 8 7 5	06/21/95	Europe				

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	Benning, W. "Statistik in Geodäsie, Geoinformation und Bauwesen", Herbert Wickmann Verlag (2002) pages 140-141.
	Deumlich, F.; Staiger, R. "Instrumentenkunde der Vermessungstechnik", Herbert Wickmann Verlag (2002) pages 205-209, 224, 225.
	Huang, Y.D. "Calibration of the Wild P32 Camera Using The Camera-ON-Theodolite Method" Photogrammetric Record, Vol. 16, No. 91, (April 1998) pages 97-104.
	Huang, Y.D.; Harley, I. (1990) "CCD Camera Calibration Without A Control Field", International Archives Of Photogrammetry And Remote Sensing, Vol. 28, No. 5 (1990) pages 1028-1034.
	Luhmann, T. "Nabereichsphotogrammetrie: Grundlagen, Methoden und Anwendungen", Herbert Wickmann Verlag (2000) pages 118-123.
	Walser, B.; Braunecker, B. "Automation Of Surveying Systems Through Integration Of Image Analysis Methods" Proceedings of 6 <sup>th</sup> Conference on Optical 3-D Measurement Techniques; Vol. I (September 2003) pages 191-198.
	Zhang, Z.; Zheng, S.; Zhan, Z. (2003) "Photo Total Station System an Integration Of Metric Digital Camera And Total Station" Proceedings of 6 <sup>th</sup> Conference on Optical 3-D Measurement Techniques; Vol. I, (September 2003) pages 176-182.
	English-language abstract of Japanese Publication No. JP2005003463, published 06/01/05, esp@cenet database.
	English-language abstract of International Patent Publication No. WO 2004/083779, published 09/30/04, esp@cenet database.
	English-language abstract of European Patent Publication No. EP1460377, published 09/22/04, esp@cenet database.
	English-language abstract of German Patent Publication No. DE19534415, published 03/20/97, esp@cenet database.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.